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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,233

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EXAMINER

SZEWCZYK, CYNTHIA

ART UNIT

PAPER NUMBER

1791

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,233	Applicant(s) YOSHIDA ET AL.	
	Examiner CYNTHIA SZEWCZYK	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/18/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 12. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be

Art Unit: 1791

notified and informed of any required corrective action in the next Office action.

The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5 and 8-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites "corresponding to an angle θ of 100° or more with respect to a central axis of the porous glass soot". It is not clear from the wording of the claim what θ measures.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an

Art Unit: 1791

application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 8, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by KASE et al. (US 2002/0050154 A1).

KASE teaches an apparatus for a porous glass base material comprising a burner (20 in figure 1) that is capable of moving longitudinally along a rotating glass rod (12 in figure 1) and an exhaust hood (26 in figure 1) that appears to move with the burner in figure 1. Figure 1 shows that the exhaust hood (26) corresponds 180° with respect to the central axis of the porous glass soot.

Regarding claim 2, see the discussion of claim 1.

Regarding claim 3, figure 1 shows that the exhaust hood is positioned such that the porous glass soot is between the exhaust hood and the burner.

Regarding claim 8, KASE discloses that the porous glass base material produced by the apparatus is sintered (para. 0044, lines 10-11).

Regarding claims 12 and 13, see the discussion of claim 8 above.

8. Claims 1-3, 8, 12, and 13 are rejected under 35 U.S.C. 102(a and e) as being anticipated by ROBA et al. (US 2004/0237594 A1).

ROBA teaches an apparatus for manufacturing porous glass base material comprising a burner (4 in figure 8) that is capable of moving longitudinally along a rotating glass rod (400 in figure 8) and an exhaust hood (6 in figure 8) that appears to move with the burner in figure 8. Figure 8 shows that the exhaust hood (6) corresponds 180° with respect to the central axis of the porous glass soot.

Art Unit: 1791

Regarding claim 2, see the discussion of claim 1.

Regarding claim 3, figure 8 shows that the exhaust hood is positioned such that the porous glass soot is between the exhaust hood and the burner.

Regarding claim 8, ROBA discloses that the porous glass base material produced by the apparatus is vitrified (para. 0009).

Regarding claims 12 and 13, see the discussion of claim 8 above.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 6, 7, 16, and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over KASE et al. (US 2002/0050154 A1).

Art Unit: 1791

KASE teaches an apparatus for manufacturing porous glass base. It would have been clear to one of ordinary skill in the art that due to apparatus deviation, the exhaust hood would not be perfectly in line with the central axis. Thus, even the smallest deviation would result in an r/R ratio slightly above 0, which would fall into the range of instant claim 6.

Regarding claim 7, figure 1 shows that the exhaust pipe is located vertically above the exhaust hood.

Regarding claim 16 and 17, KASE discloses that the porous glass base material produced by the apparatus is sintered (para. 0044, lines 10-11).

12. Claims 5, 9, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over KASE et al. (US 2002/0050154 A1).

KASE teaches an apparatus for manufacturing porous glass base. KASE is silent to the edge finish of the exhaust hood. It would have been obvious to one of ordinary skill in the art to round the edges of the exhaust hood because it is known in the manufacturing industry that rounding rough edges would protect anyone handling the hood from being cut by the edges.

Regarding claims 9 and 10, see the discussion of claim 5 above.

Regarding claim 15, KASE discloses that the porous glass base material produced by the apparatus is sintered (para. 0044, lines 10-11).

Art Unit: 1791

13. Claims 4, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over KASE et al. (US 2002/0050154 A1) in view of NOZAWA (JP 07101745 A).

KASE teaches an apparatus for manufacturing porous glass base. KASE is silent to the use of a folding mechanism.

NOZAWA teaches an apparatus for manufacturing porous glass base with a similar arrangement to KASE (see NOZAWA figure 1 and KASE figure 1). Figure 1 of NOZAWA shows that the exhaust hood contains a mechanism to fold the exhaust pipe (41) to adjust the angle corresponding to a central axis of the porous soot. It would have been obvious to one of ordinary skill in the art to incorporate the folding mechanism of NOZAWA into the apparatus of KASE because NOZAWA discloses that it is necessary to change the position of a exhaust hood to improve the effectiveness of the exhaust hood (JPO abstract).

Regarding claim 11, it would have been obvious to one of ordinary skill in the art to round the edges of the exhaust hood because it is known in the manufacturing industry that rounding rough edges would protect anyone handling the hood from being cut by the edges.

Regarding claim 14, KASE discloses that the porous glass base material produced by the apparatus is sintered (para. 0044, lines 10-11).

14. Claims 6 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over ROBA et al. (US 2004/0237594 A1).

Art Unit: 1791

Regarding claim 6, it would have been clear to one of ordinary skill in the art that due to apparatus deviation, the exhaust hood would not be perfectly in line with the central axis. Thus, even the smallest deviation would result in an r/R ratio slightly above 0, which would fall into the range of instant claim 6.

Regarding claim 16, ROBA discloses that the porous glass base material produced by the apparatus is vitrified (para. 0009).

15. Claims 5, 9, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over ROBA et al. (US 2004/0237594 A1).

ROBA teaches an apparatus for manufacturing porous glass base. ROBA is silent as to the edge finish on the exhaust hood. It would have been obvious to one of ordinary skill in the art to round the edges of the exhaust hood because it is known in the manufacturing industry that rounding rough edges would protect anyone handling the hood from being cut by the edges.

Regarding claims 9 and 10, see the discussion of claim 5 above.

Regarding claim 15, ROBA discloses that the porous glass base material produced by the apparatus is vitrified (para. 0009).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. KUWABARA et al. (US 6,306,500 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone

Art Unit: 1791

number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Carlos Lopez/
Primary Examiner, Art Unit 1791
CS